Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An apparatus comprising:

a differential preamplifier stage including a differential output; ~~and~~

a distributed differential amplifier stage including a differential end termination interface coupled to the differential output; and

a feedback element to manipulate a signal to be provided to the distributed differential amplifier stage.

Claim 2 (cancel)

Claim 3 (original): The apparatus of claim 1, further including a bridging element coupled between a differential input of the distributed differential amplifier stage and a differential output of the distributed differential amplifier stage.

Claim 4 (previously presented): The apparatus of claim 3, wherein the bridging element comprises a transverse electromagnetic transmission line segment.

Claim 5 (previously presented): The apparatus of claim 1, wherein the distributed differential amplifier stage comprises a first output transmission line and a second output transmission line and wherein the second output transmission line is differentially coupled to the first output transmission line.

Claim 6 (original): The apparatus of claim 5, wherein the first output transmission line and the second output transmission line are coupled by at least one passive element.

Claim 7 (previously presented): The apparatus of claim 1, wherein the differential output comprises a first line and a second line and wherein the differential end termination interface comprises at least one passive element coupled between the first line and the second line of the differential output.

Claim 8 (currently amended): An apparatus comprising:

a differential preamplifier stage coupled to a distributed differential amplifier stage, wherein the distributed differential amplifier stage includes a first output transmission line and a second output transmission line and wherein the first output transmission line is differentially coupled to the second output transmission line; and

a current source coupled between the first and second output transmission lines.

Claim 9 (previously presented): The apparatus of claim 8, wherein the distributed differential amplifier stage includes a differential end termination interface.

Claim 10 (previously presented): The apparatus of claim 9, wherein the differential end termination interface couples a differential output of the differential preamplifier stage.

Claim 11 (currently amended): An apparatus comprising:

a differential traveling wave amplifier including a differential input and a differential output, wherein the differential output includes first and second lines;

a current source coupled between the first and second lines of the differential output; and

at least one bridging element coupled between the differential input and the differential output.

Claim 12 (currently amended): The apparatus of claim 11, further comprising a first transistor coupled to a first line of the differential input and a second transistor coupled to a the first line of the differential output.

Claim 13 (previously presented): The apparatus of claim 12, wherein at least one of the at least one bridging element is coupled between the first transistor and the second transistor.

Claim 14 (cancel)

Claim 15 (original): The apparatus of claim 11, further comprising at least one damping element coupled to the at least one bridging element.

Claim 16 (currently amended): A system comprising:

a differential preamplifier stage including a differential output;

a distributed differential amplifier stage including a differential end termination interface coupled to the differential output, the differential end termination interface unconnected to a power supply or ground potential; and

an optical fiber coupled to the distributed differential amplifier stage.

Claim 17 (original): The system of claim 16, further including an optical modulator to modulate a signal received from the distributed differential amplifier stage.

Claim 18 (previously presented): The system of claim 16, further comprising a feedback element to manipulate a signal to be provided to the distributed differential amplifier stage.

Claim 19 (original): The system of claim 16, further including a bridging element coupled between an input and an output of the distributed differential amplifier stage.

Claim 20 (original): The system of claim 19, wherein the bridging element comprises a transverse electromagnetic transmission line segment.

Claim 21 (currently amended): The system of claim 16, wherein the distributed differential amplifier stage includes first and second output transmission lines and wherein the first output transmission line of the distributed differential amplifier stage is differentially coupled to the second output transmission line of the distributed differential amplifier stage.

Claim 22 (original): The system of claim 21, further comprising an output differential end termination interface coupled to the first and second output transmission lines.

Claim 23 (currently amended): A method comprising:

terminating a differential output of a differential preamplifier stage via a differential end termination interface of a distributed differential amplifier stage; and

modulating an output signal of the distributed differential amplifier stage.

Claim 24 (cancel)

Claim 25 (original): The method of claim 23, further including limiting an amplitude of the differential output.

Claim 26 (previously presented): The method of claim 23, further including feeding back the differential output to manipulate the differential output.

Claim 27 (original): The method of claim 23, further including bridging an input line and an output line of the distributed differential amplifier stage with a transverse electromagnetic transmission line segment.

Claim 28-30 (canceled)

Claim 31 (previously presented): The method of claim 23, further including differentially coupling a first output transmission line and a second output transmission line of the distributed differential amplifier stage.